

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No.: 10/623,621
Attorney Docket No.: Q76494

AMENDMENTS TO THE DRAWINGS

Seven (7) sheets of Replacement drawings are attached hereto for Figures 1 through 7.

Attachment: Seven (7) Replacement Sheets

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

REMARKS

New claims 73 - 89 are added, hence, claims 54 - 89 are all the claims pending in the application. The new claims are supported at least at pages 26-30 of the specification.

Statement of Substance of Interview

Applicant thanks the Examiner and Supervisory Patent Examiner Don Wong, for conducting an interview on April 19, 2006 with the undersigned and others listed in the Interview Summary.

As noted in the Interview Summary, claims 54, 57 and 70 were discussed. During the interview a draft amendment to the claims was discussed to amend the claims to recite a computer-readable medium and locating a fragment of the metadata, to address the rejections under §101. Agreement was not reached.

The Evian reference was discussed and the Examiner explained how he read the claims on the Evian reference.

The objection to the drawings was discussed, with the undersigned pointing out that figures 1-7 do not necessarily show prior art that falls within the scope of any section of §102.

Drawings

The drawings are objected to because figures 5 and 7 are discussed in the Background section of the application and the Examiner suggests labeling them as prior art. Applicant submits replacement drawing herewith in which figures 1 through 7 are labeled "Related Art"

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

consistent with the discussion of those figures in the specification under the heading “Description of the Related Art.” It is respectfully submitted that there is no evidence in the record that figures 5 and 7 show subject matter that is prior art within the ambit of any section of 35 U.S.C. § 102.

Replacement drawings for Figures 1-7 are submitted herewith.

Specification

The specification is objected to because of the title and the Examiner requests that any related applications be listed in the specification. Applicant amends the title and specification as the Examiner requires.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

Claims 56-58 and 64 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for several reasons. Applicant amends claims 57, 58 and 64 and respectfully requests the Examiner to withdraw the rejection. Further, Applicant respectfully submits that the term “XPath” is not objectionable, as the Examiner indicated during the interview.

Claim Rejections - 35 U.S.C. § 101

Claims 54-72 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicant amends claim 54 along the lines discussed in the interview to recite that the index structure is “contained in a computer readable storage medium.” Claims 63, 67 and 70 -72 are amended in a similar manner. It is respectfully submitted that the claims asserted

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

in the Office Action to recite “descriptive material *per se*” (claims 54, 63, 67 and the claims that depend therefrom) meet the requirements of 35 U.S.C. § 101 and recite statutory subject matter.

Claims 54, 67, 70 and 72 are rejected as reciting non-statutory subject matter also because allegedly “there is no functional relationship in the data structures.” Claims 54, 67, 70 and 72 are amended to recite that the index structure is “contained in a computer-readable storage medium” and it is respectfully submitted that those claims recite a functional interrelationship between the claimed elements.

The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, published November 22, 2005 in the Official Gazette (“Interim Guidelines”), as well as MPEP §2106, both acknowledge that a computer-readable medium encoded with a data structure is statutory. “In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.” MPEP §2106 IV(B)(1)(a), and Interim Guidelines Annex IV(a). See also Interim Guidelines Annex IV, citing *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *In re Warmerdam*, 33 F.3d 1354, 1360-61, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994) (claim to a computer having a specific data structure stored in memory held statutory product-by-process claim).

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

Since the claims recite that the index structure is contained in a computer-readable storage medium, it is respectfully submitted that the claims define a functional relationship and recite statutory subject matter. See Interim Guidelines Annex IV.

Not only do the claims recite a functional interrelationship, but they are eligible for patent protection because as a whole they recite an invention that produces a “useful, concrete and tangible result” and therefore have a practical application. See Interim Guidelines at pg. 1 and Annex II(a), citing *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 1373-74, 47 USPQ2d 1596, 1601-02 (Fed. Cir. 1998). In *State Street Bank*, the Federal Circuit found that the mere transformation of data, representing discrete dollar amounts, into a final share price, produced a useful, concrete and tangible result. See Interim Guidelines at Annex II(B)(ii). In *AT&T Corp. v. Excel Comms., Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999), the Federal Circuit found that the generation of a data field (a PIC field) in a telecommunications billing system that represents information about a callers PIC (“primary interexchange carrier”), “comfortably falls within the scope of §101.” And of course, the claims in *In re Lowry*, discussed above, are directed to a data structure which was found statutory under §101.

Here, the claims as a whole are directed to an invention that, like the inventions in *State Street Bank*, *AT&T* and *Lowry*, produces a useful, concrete and tangible result. For example, the claims recite the index structure having location information expressed as a predetermined code, for locating a fragment of metadata. See claim 54, for example. The application, in paragraph [27] of the substitute specification, for example, describes problems when comparing XPath

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

expressions when performing a search of TV-Anytime Forum (TVA) metadata. The application describes providing an index structure of metadata including information for a key encoded to allow the contents to be searched more quickly. See paragraph [28]. The specification describes using a predetermined code in such a structure. See, for example, paragraph [30] and Table 3. The claims are directed to an index structure that contains location information expressed in such a predetermined code. Accordingly, the claims as a whole recite an invention that produces a useful, concrete and tangible result, and hence comfortably fall within the scope of §101.

Claim 71 is rejected as reciting non-patentable subject matter because it is asserted that the claimed medium “can be interpreted as a signal (e.g., ‘carrier wave’, page 42).” Claim 71 is amended to recite a computer readable storage medium, and it is respectfully submitted that claim 71 recites statutory subject matter.

New claims 85-89 recite an index structure for use in locating a fragment of metadata and which is contained in a computer-readable storage unit. It is respectfully submitted that these claims fall within the scope of §101 and recite statutory subject matter.

Claim Rejections - 35 U.S.C. § 102(a)

Claims 54-72 are rejected under 35 U.S.C. § 102(a) as being anticipated by a reference entitled “1st Draft of Metadata Specification SP003v1.3,” XP002323574 by Evian. Claims 54, 63, 67, 70 and 72 are amended and it is respectfully submitted that Evian does not anticipate any of the pending claims.

Claim 54, for example, recites an index structure for metadata that is divided into fragments. The index structure contains a list of keys that correspond to fields of the metadata and location information for defining a key and locating a fragment of the metadata. Claim 54 requires that at least a part of the location information is expressed as a predetermined code. The claim requires that the predetermined code is assigned to at least a part of the location information according to a convention for associating codes with portions of the metadata.

In the Office Action it is asserted that Evian discloses in Table 2.3.2 location information, at least a part of which is expressed as a predetermined code. More specifically, the Office Action states that the Key Index Table in section 2.3.2 of Evian discloses a “program code” which allegedly corresponds to the claimed predetermined code. During the interview the Examiner clarified the rejection indicating that the Key Index Table shows fields, such as the `key_xpath_ptr` field, which contains a fixed length code, namely a 16-bit encoded value that relates to a location of a fragment of the metadata.

Evian states the following with respect to the `key_xpath_ptr` field in Table 2.3.2.

fragment_xpath_ptr: Reference to the start of the fragment xpath string. This reference is in the form of an offset, in bytes, from the start of the string repository in the current container. The value of this string is the XPath to the first element of the sub-tree that the target element section carries.

Accordingly, the `fragment_xpath_ptr` field merely holds an offset into the string table where the XPath strings, such as the XPath expressions for the fragment pointers, are held. See Evian section 2.2.3.

Claim 54 as amended requires that the predetermined code is “assigned to said at least a part of the location information according to a convention for associating codes with portions of the metadata.” Table 3 in the present specification show an example of such a convention assigning predetermined values (e.g., 0x04) to a standard fragment types. It is respectfully submitted that Evian does not satisfy this limitation. Even if the string offsets in the `fragment_xpath_ptr` field in the table in section 2.3.2 of Evian are deemed to be a code, Evian does not teach or suggest that claim limitation. Evian’s offset value into the string table is not a predetermined code much less a code that is assigned to location information according to a convention for associating codes with portions of metadata, as required by claim 54. It is respectfully submitted that the offset values into the string table are not predetermined as they are likely to change each time an index table is sent from a provider to a receiver.

The `fragment_xpath_ptr` points to a certain position in the data container containing the XPath strings. However, it is believed that the location of a particular fragment, such as the “ProgramInformation” fragment, within the data container can be totally different depending on the time or day the index list is received or how the XPath information is stored inside the container. Accordingly, the offset value held in the `fragment_xpath_ptr` field is not predetermined.

Even if the offset value held in the `fragment_xpath_ptr` field is deemed to be a predetermined code, it is respectfully submitted that the offset value is not “assigned to said at least a part of the location information according to a convention for associating codes with portions of the metadata” as required by claim 54. Evian neither teaches nor suggest that the

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

offset value held in the fragment_xpath_ptr field is assigned based on any convention much less a convention for associating codes with portions of metadata.

For at least these reasons it is respectfully submitted that Evian does not anticipate claim 54. Independent claims 63, 67 and 70 - 72 recite similar limitations to those discussed above with respect to claim 54 and accordingly, it is respectfully submitted that Evian does not anticipate those claims or the claims that depend therefrom for at least the same reasons.

New independent claim 85 is directed to a index list structure contained in a computer readable storage medium, for use in locating a fragment of metadata. Claim 85 recites a fragment type field containing an encoded value assigned to a standard fragment type specifying a location of the fragment. The claim requires that the encoded value is assigned to the standard fragment type according to a convention for specifying standard fragment types. Since Evian does not teach or suggest assigning an encoded value to a standard fragment type according to a convention for specifying standard fragment types, it is respectfully submitted that Evian does not anticipate claim 85. New claims 86-89 incorporate by reference all the limitation of claim 85, and hence, are patentable for at least the same reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/623,621
Attorney Docket No.: Q76494

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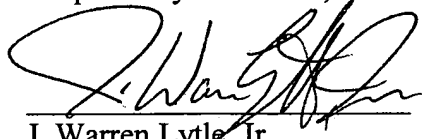
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